

# EXECUTIVE SUMMARY

## FINAL ENVIRONMENTAL IMPACT STATEMENT

### COLORADO RIVER MANAGEMENT PLAN

### GRAND CANYON NATIONAL PARK

The Colorado River in Grand Canyon provides a unique combination of thrilling whitewater adventure and magnificent vistas of a remarkable geologic landscape, including remote and intimate side canyons. The 277-mile long river corridor also is home to unique and abundant natural and cultural resources, including diverse wildlife, threatened and endangered species, hundreds of archeological sites, caves, and natural soundscapes. For these reasons, a river trip through the Grand Canyon is one of the most sought after backcountry experiences in the country, and nearly 22,000 visitors run the river annually.

#### PURPOSE OF AND NEED FOR THE ACTION

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The park's 1995 *General Management Plan* set as an objective the management of "the Colorado River corridor through Grand Canyon National Park to protect and preserve the resource in a wild and primitive condition" (NPS 1995a). The *General Management Plan* also stated, "The park's 1989 *Colorado River Management Plan* will be revised as needed to conform with the direction given in the management objectives of the *General Management Plan*. The use of motorboats will be addressed in the revised plan, along with other river management issues identified through the scoping process" (NPS 1995a).

A revised *Colorado River Management Plan* is needed to address both long-standing and recent issues concerning resource protection, visitor experience, and public services along the river; to consider the impacts of NPS river management on federally recognized American Indian tribes whose reservations adjoin Grand Canyon National Park; and to fulfill the requirements of a 2002 agreement that settled a lawsuit about the river management plan.

The Colorado River corridor in Grand Canyon National Park will be managed to provide a wilderness-type river experience in which visitors can intimately relate to the majesty of the Grand Canyon and its natural and cultural resources. ***Visitors traveling through the canyon on the Colorado River will have the opportunity for a variety of personal outdoor experiences, ranging from solitary to social, with little influence from the modern world.*** The Colorado River corridor will be protected and preserved in a wild and primitive condition.

The Hualapai Indian Reservation and Grand Canyon National Park share a 108-mile-long boundary along the Colorado River in western Grand Canyon. The Hualapai Tribe's vision for the Colorado River corridor is to protect the resources of the tribe and to provide for the development of economic opportunities for existing and future members of the tribe. The tribe has limited economic resource potential and looks to the Colorado River corridor as a source of growth for tribal economic development and employment.

***The Navajo Nation and Grand Canyon National Park share a boundary along approximately 62 miles of the Colorado River through the Marble Canyon section of the eastern Grand Canyon. Coordination with the Navajo Nation is necessary for appropriate management of resources and visitor use in this area. Additionally, the Havasupai Indian Reservation borders Grand Canyon National Park along the plateau uplands west of Pasture Wash and in Havasu***

***Canyon. Coordination with the Havasupai Tribe is necessary to address management of resources and visitor use concerns along the shared NPS/tribal boundary. Numerous other federally recognized Indian tribes attach religious or cultural significance to Grand Canyon National Park. Coordination with these tribes is necessary to address management of resources and visitor use concerns for areas of traditional importance to these tribal governments.***

The United States has a trust responsibility to protect tribal lands and waters. The plan considers and analyzes the social and economic impacts of the various alternatives on the Hualapai Indian Tribe and its trust resources. ***To address management issues along the common boundary and impacts from river-related visitor use on tribal lands, the Hualapai Tribe was a cooperating agency with the National Park Service for the preparation of the Environmental Impact Statement.*** As a cooperating agency, the Hualapai Tribe established its purpose for the plan as fulfilling the tribe's need to preserve and protect tribal traditions, culture, sovereignty, and resources for future generations and to cooperate on a government-to-government basis with local, state, and federal governments.

## SCOPE OF THE PLAN

***As required by the National Environmental Policy Act (NEPA), the Final Environmental Impact Statement*** evaluates a full range of ***reasonable*** alternatives for the identified issues as well as comprehensively evaluates impacts to natural and cultural resources from visitor uses on the Colorado River.

The *Colorado River Management Plan* is primarily a visitor use management plan, which specifies actions to preserve park resources and the visitor experience, while enhancing recreational opportunities. Although this plan is intended to cover at least the next 10 years, some of the plan's goals, objectives, and desired conditions may require a longer period to achieve.

Where the Hualapai Reservation and Grand Canyon National Park share boundaries, the *Colorado River Management Plan* describes management zones that reflect the variety and intensity of visitor activities, particularly in the river segments downstream of Diamond Creek. The plan addresses cooperative management issues with neighboring units of the national park system, tribal governments, and other agencies with jurisdiction or interests affected by, or that may themselves affect, management of the Colorado River corridor in the park. In addition, the plan considers the input of other stakeholders, as expressed in the scoping, ***public comment***, and stakeholder participation process.

Glen Canyon Dam operations, allocation of administrative use, wild and scenic river designation, formal wilderness designation, backcountry operations, and commercial overflights are outside the scope of this document.

## MAJOR ISSUES AND AREAS OF CONTROVERSY

Major issues identified during public and internal scoping and tribal consultation include the following:

- Appropriate level of visitor use consistent with natural and cultural resource protection, visitor experience goals, and ***wilderness character***

- Allocation of use between commercial and noncommercial groups
- Noncommercial permit system
- Appropriate levels of motorized and nonmotorized boat use
- Determination of the range of public services
- Levels of helicopter use to transport river passengers to and from the river
- Appropriate levels and types of upriver travel from Lake Mead
- Quality of river trips including crowding, trip length, group size, and scheduling issues
- Administrative use

The range of comments from public and internal scoping and tribal consultation indicated that each of these issues carried some level of controversy. However, comments seemed to be most divided on the issues of motorized versus nonmotorized use, allocations between commercial and noncommercial users, and the appropriateness of helicopter exchanges.

### **COMMERCIAL RIVER SERVICES**

*The Colorado River Management Plan addresses issues related to commercial activities on the river. Description and analysis of potential impacts on the affected environment resulting from commercial operations are found throughout the Final EIS. Determination of the types and levels of commercial services necessary and appropriate for the Colorado River through Grand Canyon National Park were determined through this analysis.*

*New contracts will be issued for commercial operations upon the completion of the Colorado River Management Plan. These contracts will be issued in accordance with the National Park Service Concessions Management and Improvement Act of 1998 (16 USC 5951) and implementing regulations at 36 CFR 51. Concession contracts and operating plans will reflect management decisions reached in the Record of Decision for the Colorado River Management Plan and will seek to provide quality visitor experiences consistent with the preservation of the park's natural and cultural resources.*

### **ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVES**

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For the purposes of this plan, the Colorado River has been divided into two geographic sections that recognize the different management zones on the river, with a specific set of alternatives for each section. The NPS preferred alternative combines Lees Ferry **Modified** Alternative H with Lower Gorge **Modified** Alternative 4.

- **Lees Ferry Alternatives** —Eight alternatives have been developed for the section of river from Lees Ferry (River Mile [RM] 0) to Diamond Creek (RM 226). The alternatives include a no-action alternative (Alternative A) plus Alternatives B through H. **Modified** Alternative H is the preferred alternative.
- **Lower Gorge Alternatives** —Five alternatives have been developed for the section of river from Diamond Creek (RM 226) to Lake Mead (RM 277). The alternatives include a no-action alternative (Alternative 1) plus Alternatives 2 through 5. **Modified** Alternative 4 is the **NPS** preferred alternative.

## CARRYING CAPACITY AND KEY CRITERIA FOR DEVELOPING THE LEES FERRY ALTERNATIVES

The number of launches per day at Lees Ferry varies widely under current conditions, and during the peak season up to nine trips per day can launch. To reduce crowding and bottlenecks from this level of daily launches, a launch-based system would be instituted to distribute launches more evenly. All action alternatives would reduce the maximum number of trips launching per day from nine to between four and six during the summer peak season. To further mitigate crowding, reductions in maximum trip lengths and group sizes, as well as distribution of launches into non-peak seasons, were analyzed. The action alternatives would reduce the maximum group size from 43 (passengers and crew) to 24–40.

The planning process for the *Colorado River Management Plan* analyzes visitor carrying capacity, visitor experience, and potential visitor use impacts on the resource. The primary factors that determine carrying capacity on the Colorado River from Lees Ferry to Lake Mead are:

- Number, size, distribution, and expected lifespan of camping beaches
- Number, types, and condition of natural and cultural resources
- Contacts per day (on-river attraction site encounters), campsite competition, number of trips at one time (TAOT), number of people at one time (PAOT), group size, trip length, and launch patterns

The first two factors describe the physical environment and serve as the foundation for determining appropriate levels of overall use. The third factor describes variables that characterize the visitor experience. The planning team concluded that no single standard could be used to calculate carrying capacity for recreational use in the river corridor. Rather, it is necessary to consider the interaction of all the factors, including user-days, the number of trips and people in the canyon at one time, and the amount of user discretionary time, and how they affect resources and visitor experience.

## LEES FERRY ALTERNATIVES (RIVER MILES 0 TO 226)

Key features of Alternatives A through H for the section of river from Lees Ferry (RM 0) to Diamond Creek (RM 226) are below.

### ***Alternative A: No Action (Current Management)***

Alternative A is the no-action alternative for the Colorado River section between Lees Ferry and Diamond Creek. The number of launches per day at Lees Ferry varies widely under current conditions, and up to nine trips per day can launch during spikes in the peak season. This alternative allows for nine months of mixed use (both motorized and nonmotorized trip types) and three months of nonmotorized use. There *would continue to be* no limits on *passenger* exchanges at Whitmore, *which currently average 6,630 out and 3,635 passengers in per year, with nearly all passengers accessing the exchange point via helicopter.* The total number of commercial and noncommercial passengers averages 22,461.

## SUMMARY OF ALTERNATIVES —LEES FERRY TO DIAMOND CREEK

	Alternatives							
	A	B	C	D	E	F	G	Modified H
<b>Number of Motor/ No-Motor Months</b>	9/3	0/12	0/12	8/4	6/6	6/6	8/4	<b>5.5/6/5</b>
<b>Months with No Motors</b>	Sept 15– Dec 15	All	All	Mar, Apr, Sept, Oct	Oct–Mar	Jul–Dec	Sept–Dec	<b>Sept 16–March 31</b>
<b>Maximum Number of Launches per Day</b>								
Summer	9	4	4	5	6	6	6	6
Shoulder	7	2	3	3	3	4	5	<b>4 (April 16-30), 6 (Sept 1-15), 3 (Remainder)</b>
Winter	1	1	2	1	2	2	2	1
<b>Maximum Group Size (including guides)</b>								
Commercial Motor	43	N/A	N/A	25	30	30	40	<b>32 (May-Aug)/24 (Remainder)</b>
Commercial Oar	39	25	30	25	25	30	30	<b>32 (May-Aug)/24 (Remainder)</b>
Noncommercial Standard	16	16	16	16	16	16	16	16
Noncommercial Small	N/A	8	N/A	8	8	8	8	8
<b>Maximum Trip Length to Diamond Creek (in number of days)</b>								
<b>Summer (May–August)</b>								
Commercial Motor	18	N/A	N/A	10	8	10	8	10
Commercial Oar	18	16	16	16	14	16	14	16
Noncommercial Motor	18	N/A	N/A	16	16	16	14	12
<b>Noncommercial Oar</b>	<b>18</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>14</b>	<b>16</b>
<b>Shoulder Seasons (March–April/September–October)</b>								
Commercial Motor	18	N/A	N/A	10	8	10	8	12
Commercial Oar	21	18	18	18	16	18	16	18
Noncommercial Motor	21	N/A	N/A	18	18	18	16	12
<b>Noncommercial Oar</b>	<b>21</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>16</b>	<b>18 (Sept 1-15), 21 (Remainder)</b>
<b>Winter (November–February)</b>								
Commercial Motor	30	N/A	N/A	18	N/A	18	N/A	N/A
Commercial Oar	30	N/A	21	21	N/A	21	N/A	N/A
Noncommercial Motor	30	N/A	N/A	18	N/A	18	18	N/A
Noncommercial Oar	30	18	21	30	21	21	21	25
<b>Whitmore Exchanges (months allowed)</b>								
Helicopter Exchanges**	All	None	None	None	Apr–Sept	Jan–Jun	Jan–Aug	<b>April–Sept</b>
Hiking Exchanges**	All	None	All	All	All	All	All	<b>April–Sept</b>
<b>Estimated Total User-Days</b>								
Commercial	113,083	97,694	166,814	137,368	115,500	128,689	115,500	115,500
Noncommercial	58,048	74,523	115,783	85,946	121,683	106,457	134,410	<b>113,486</b>
<b>Total</b>	<b>171,131</b>	<b>172,218</b>	<b>282,598</b>	<b>223,314</b>	<b>237,183</b>	<b>235,146</b>	<b>249,910</b>	<b>228,986</b>
<b>Estimated Total Yearly Passengers</b>								
Commercial	18,891	7,914	17,686	14,979	16,120	18,671	19,688	<b>17,606</b>
Noncommercial	3,571	4,980	7,543	5,449	7,693	6,745	8,992	<b>7,051</b>
<b>Total</b>	<b>22,461</b>	<b>12,894</b>	<b>25,228</b>	<b>20,427</b>	<b>23,812</b>	<b>25,415</b>	<b>28,680</b>	<b>24,657</b>
<b>Opportunity for Winter Commercial Trips?</b>	Motor or oar	No	Oar	Motor or oar	No	Motor or oar	No	<b>No</b>
<b>UDT (total yearly hours)</b>	355,081	576,754	752,496	710,079	569,603	518,889	421,073	<b>567,238</b>
<b>Estimated Maximum Trips at One Time</b>	70	60*	60*	58	60*	54	53	60*
<b>Estimated Maximum Passengers at One Time</b>	1,095	877	900	890	972	972	895	985

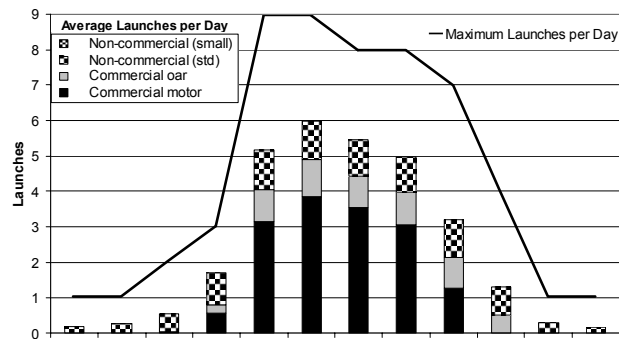
\* NPS would monitor and adaptively manage to ensure that actual TAOT remain at 60 or lower.

\*\*In cooperation with the Hualapai Tribe.

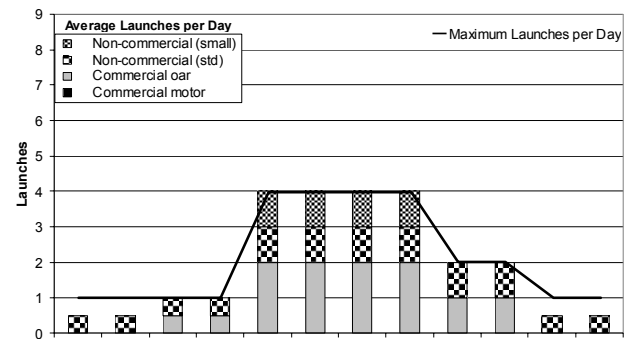
NOTE: These are nearest whole numbers. Totals reflect cumulative fractional differences.

## Lees Ferry Alternatives

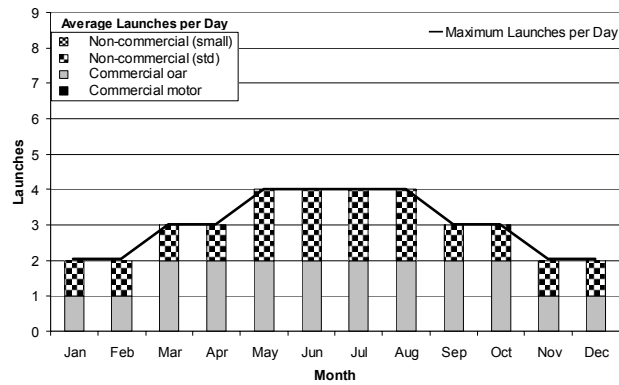
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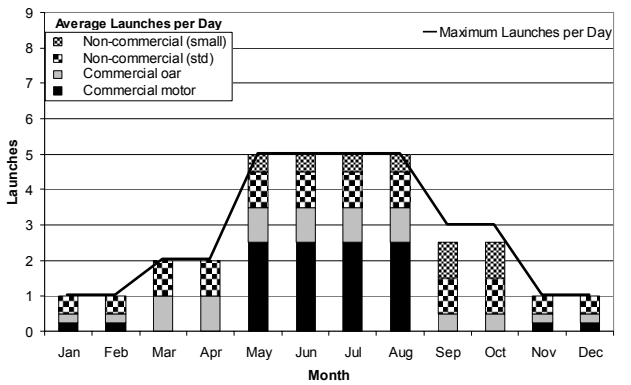
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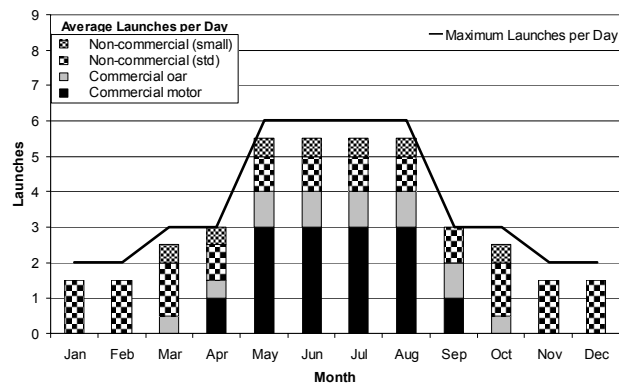
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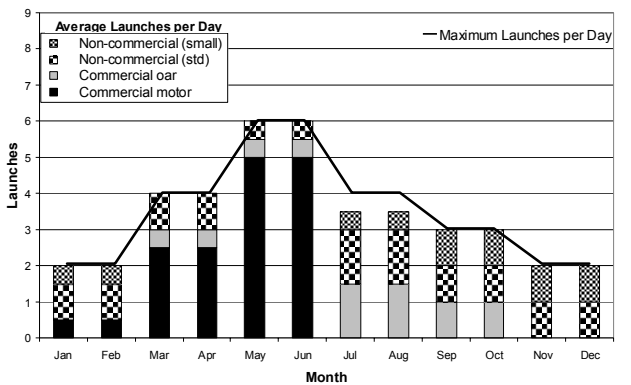
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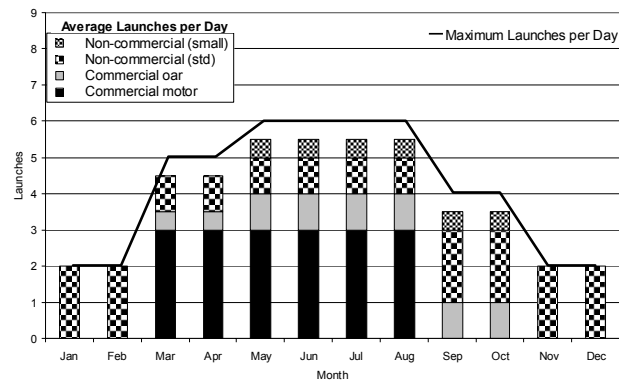
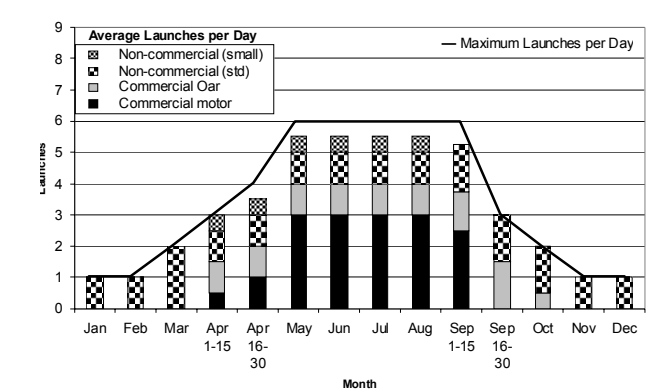
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### **Alternative B**

Alternative B is a no-motor alternative characterized by the lowest group sizes, the least number of maximum daily launches, and substantially lower numbers of *estimated* yearly passengers (12,894). There would be a limited increase in winter recreational use. ***There would be no passenger exchanges at Whitmore.***

### **Alternative C**

Alternative C is a no-motor alternative characterized by smaller group sizes and fewer maximum daily launches (except in winter), and an increase in the number of *estimated* yearly passengers (25,228). A substantial increase in shoulder and winter season use would be allowed. ***The NPS would allow passenger exchanges at Whitmore year-round (up to 2,500 out and 2,500 in), but it is assumed that the NPS and the Hualapai Tribe would cooperatively establish a means to regulate the numbers and types of exchanges such that helicopter access would not be allowed under this alternative, but hiking exchanges would be allowed all year.***

### **Alternative D**

Alternative D is a mixed-motor/no-motor alternative. Shoulder months (March-April and September-October) would be set aside for nonmotorized use, with the remaining months for mixed use. This alternative is characterized by the lowest allowable group sizes; fewer maximum daily launches, and reduced *estimated* yearly passenger totals (20,427). ***The NPS would allow passenger exchanges at Whitmore year-round (up to 2,500 out and 2,500 in), but it is assumed that the NPS and the Hualapai Tribe would cooperatively establish a means to regulate the numbers and types of exchanges such that there would be no helicopter access for passenger exchanges at Whitmore. Hiking exchanges would be allowed all year.***

### **Alternative E**

Alternative E is a mixed motor/no-motor alternative. A six-month mixed-use season would be allowed from April to September, with the remaining six months for nonmotorized use. This alternative is characterized by smaller group sizes and fewer launches per day (except in the winter season), and an increase in *estimated* yearly passenger totals (23,812). ***The NPS would allow passenger exchanges at Whitmore year-round (up to 2,500 out and 2,500 in), but it is assumed that the NPS and the Hualapai Tribe would cooperatively establish a means to regulate the numbers and types of exchanges such that helicopter access would occur only during the mixed-use season (April through September). Hiking exchanges would be allowed all year, but it is assumed that none would occur.***

### **Alternative F**

Alternative F is a mixed motor/no-motor alternative that would split the year in half, with mixed use allowed from January through June, and nonmotorized use from July through December. It is characterized by smaller group sizes and fewer launches per day (except in the winter season), and an increase in *estimated* yearly passenger totals (25,415). ***The NPS would allow passenger exchanges at Whitmore year-round (up to 6,600 out and 3,400 in), but it is assumed that the***

***NPS and the Hualapai Tribe would cooperatively establish a means to regulate the numbers and types of exchanges such that helicopter access would occur only during the mixed-use season (January through June). Hiking exchanges would be allowed all year, but it is assumed that none would occur.***

### **Alternative G**

Alternative G is a mixed motor/no-motor alternative, with eight months mixed use and four months (September through December) nonmotorized use. It is characterized by slightly smaller maximum group sizes, the highest level of allowable daily launches of all of the action alternatives, and the highest number of *estimated* yearly passengers (28,680). ***The NPS would allow passenger exchanges at Whitmore year-round (up to 7,200 out and 3,700 in), but it is assumed that the NPS and the Hualapai Tribe would cooperatively establish a means to regulate the numbers and types of exchanges such that helicopter access would occur only during the mixed-use season (January through August). Hiking exchanges would be allowed all year, but it is assumed that none would occur.***

### **Modified Alternative H (NPS Preferred Alternative)**

***Modified Alternative H is the NPS preferred alternative for the section of river between Lees Ferry and Diamond Creek. It is a mixed motor/no-motor alternative with 5.5 months of mixed use occurring from April 1 through September 15, and 6.5 months of nonmotorized use from September 16 through March 31. It is characterized by smaller group sizes and fewer daily allowable launches except during the winter months. This alternative would allow for a moderate increase in estimated yearly passenger totals (24,657). The NPS would allow passenger exchanges at Whitmore (up to 5,715 out and 4,035 in at current exchange levels) to accommodate trips launching during the mixed-use period (April 1 through September 15), and in the nonmotorized season only for those trips launching during the mixed-use period. Time-of-day restrictions would apply for exchanges.***

## **LOWER GORGE ALTERNATIVES (RIVER MILES 226 TO 277)**

Recreational use patterns change in this section of the river as a result of differing land management practices and road and boat access to the river by way of Hualapai tribal lands and Lake Mead. Management zones in this section of the river allow for increased densities and types of use. Key features of the Lower Gorge alternatives are summarized as follows:

### **Alternative 1: No Action (Existing Condition)**

Alternative 1 is the no-action alternative ***for the Lower Gorge***. Current management is largely unregulated and is characterized by Hualapai River Runner (HRR) day trips, occasional HRR overnight trips, ***trips from Lees Ferry continuing below Diamond Creek***, noncommercial trips launching at Diamond Creek, ***upriver travel for commercial pickups and towouts***, and pontoon boat excursions in the Quartermaster area (RM 262). Passengers for the pontoon boat excursions and the HRR trips enter and exit the river corridor by means of helicopters ***on sovereign Hualapai tribal land*** in the Quartermaster area. ***The National Park Service does not regulate helicopter operations on tribal land.***



## SUMMARY OF ALTERNATIVES —LOWER GORGE

	Alternatives				
	1	2	3	Modified 4	5
<b>Diamond Creek Launches (maximum group size, including guides)</b>					
Noncommercial	Maximum of two launches per day (16 people each)	Same as alternative 1.	Same as alternative 1.	Same as alternative 1.	Same as alternative 1.
Hualapai River Runner (HRR) Day Trips	Average of one launch per day (up to 100 people)	Peak season: two launches per day (30 people). Non-peak season: one launch per day (30 people)	Peak season: three launches per day (30 people). Non-peak season: two launches per day (30 people)	Peak season: variable (40 people), not to exceed 96 passengers/day. Non-peak season: two launches per day (35 people)	Same as Modified Alternative 4.
HRR Overnight Trips	Average of one trip per week (34 people).	One trip per day (30 people).	Two trips per day (30 people).	Peak season: three trips per day (20 people). Non-peak season: one trip per day (20 people).	Same as Modified Alternative 4.
<b>Campsites</b>					
Available Campsites	15	15+1	15+2	15+3	15+3
Modification of New Campsites*	N/A	Low	Medium	Low	Low
<b>Quartermaster Area Dock</b>					
Type of Dock	Two small floating docks (deteriorated).	None.	One small floating dock at RM 262.5.**	<b>One floating dock, sized to safely accommodate HRR and pontoon use.**</b>	One large floating dock at RM 263.**
<b>Pontoon Operations</b>					
Maximum Daily Passengers†	Peak season: 188 Non-peak season: <b>130</b>	0	400	<b>480 (600 based on favorable performance reviews and resource monitoring data.)</b>	960
<b>Upriver Travel from Lake Mead</b>					
Allowable Destination	Unlimited below Separation Canyon.	Below RM 262.	Below Separation Canyon.	Below Separation Canyon ( <b>RM240</b> ).	Below RM 273.
Allowable Use	Unrestricted commercial pick-ups, tow-outs, and noncommercial jetboats.	Commercial pick-ups: peak season —two per day; non-peak season — none. Tow-outs allowed below RM 262.	Four commercial pick-ups per day, year-round.‡ Two jetboat tours per day in the peak season. Tow-outs allowed below Separation Canyon.	Commercial pick-ups: peak season — four per day; non-peak season —one per day. <b>No jetboat tours.</b>  Tow-outs below <b>Separation Canyon RM 240.</b>	Jetboat pickups and tow-outs below RM 273.

\* Low —vegetation removal only; medium —vegetation removal and limited supply storage.

\*\* Assumes removal of existing docks, and installation of a single dock at RM 262.5, contingent on full environmental compliance.

† Passenger access occurs via helicopter.

‡ Commercial pickups would be allowed to shuttle kayak trips up to RM 273.

**Alternative 2**

Alternative 2 is characterized by implementation of daily passenger limits launching from Diamond Creek and by the elimination of pontoon boat operations and associated facilities in the Quartermaster area. This alternative would provide for smaller group sizes, trip length limits, and a decrease in the number of people launching per day. Upriver trip takeouts would be allowed based on *downriver* continuation trip needs.

**Alternative 3**

Alternative 3 is characterized by daily passenger limits for HRR and pontoon boat operations. Peak daily use for HRR day trips would be reduced, while HRR overnight trips would go from an average of three trips per month to two trips per day year-round. The number of pontoon boat passengers would be capped at 400 per day. Takeouts for upriver trips would be allowed based on takeout needs for continuation trips. An additional commercial use, jetboat tours, would be allowed, with a maximum of two tours per day. A floating, formal dock would be provided at RM 262.5, contingent on environmental compliance and the removal of the informal docks at RM 262 and 263.

**Modified Alternative 4 (NPS Preferred Alternative)**

*Modified* Alternative 4 is *the NPS preferred alternative for the Lower Gorge. It is* characterized by use limits and a redistribution of HRR operations. This alternative represents a consensus between Grand Canyon National Park and the Hualapai Tribe on levels of HRR use and other uses originating at Diamond Creek. However, *Modified* Alternative 4 represents the National Park Service's preference for lower levels of pontoon boat use compared to *levels proposed by the Hualapai Tribe*. Peak daily use for HRR trips would be comparable to current conditions, *with smaller maximum group sizes*, while HRR overnight trips would go from an average of three per month to up to three per day. The number of pontoon boat passengers would be capped at 480 per day, *but could increase to 600 per day based on favorable performance reviews and resource monitoring data*. A floating, formal dock would be provided at RM 262.5, contingent on environmental compliance and the removal of the informal docks at RM 262 and 263. *Upriver towouts and pickups would be limited to four per day during the peak season below Separation Canyon (RM 240). No jetboat tours would be allowed.*

**Alternative 5 (Hualapai Tribe Proposed Action)**

Alternative 5 is *the Hualapai Tribe's proposed action for the Lower Gorge. It is* characterized by use limits and a redistribution of HRR operations. This alternative represents a consensus between Grand Canyon National Park and the Hualapai Tribe on levels of HRR use and other uses originating at Diamond Creek. This alternative, however, represents the Hualapai Tribe's proposed higher levels of pontoon boat use in the Quartermaster area compared to *the NPS preferred alternative*. Peak daily use for HRR trips would be comparable to current conditions, *with smaller maximum group sizes*, while HRR overnight trips would go from an average of three per month to up to three per day. The number of pontoon boat passengers would be capped at 960 per day. A floating, formal dock would be provided at RM 262.5, contingent on environmental compliance and the removal of the informal docks at RM 262 and 263. *All* upriver boat use, *with the exception of pontoon boat traffic*, would be restricted to below *the NPS/Hualapai boundary* at RM 273.

## MONITORING AND IMPLEMENTATION PLAN

*After the Record of Decision (ROD) has been signed, the National Park Service will develop a detailed plan for monitoring and implementation of the Colorado River Management Plan as described in the ROD. To fund monitoring and implementation, the NPS will be considering all possible funding sources, including fee demonstration funds, franchise fees, special park use permits, and funds through special regulations. Any combination of funding mechanisms may be used. It is the intention of Grand Canyon National Park to pursue long-term permanent solutions to guarantee funds for monitoring, mitigation, and other implementation needs for the life of the plan. As part of the monitoring and implementation plan, the existing limits of acceptable change indicators and standards from the 1989 CRMP will be updated and implemented, as appropriate. If resource conditions (e.g., disappearing beaches) change sufficiently to adversely affect resources or visitor experiences, or if mitigation measures cannot be adequately funded or implemented or are unsuccessful, park managers will use an adaptive management approach to review and revise visitor use prescriptions in this river management plan.*

## OTHER ELEMENTS CONSIDERED IN THE PLAN

The following elements are common to all of the alternatives.

**Allocation System.** Three approaches to distributing trips in Grand Canyon were evaluated: (1) a “split” allocation system where commercial and noncommercial users compete for permits in separate pools with different distribution mechanisms, (2) a “common pool” system where all users compete for permits in the same pool and in the same way, and (3) an “adjustable split” allocation system that combines features of both.

Objectives for selecting an approach to allocation of use include (1) address user perception of allocation inequity, (2) maintain or improve quality of commercial services offered to river users, (3) *minimize* costs to river users while adequately funding river operations, *and* (4) *minimize complexity for people seeking river trip opportunities.*

The National Park Service’s preferred option is the *No Action/ Split Allocation System*, which *continues to allocate use between the commercial and noncommercial sectors. The ratio of commercial to noncommercial use is reflected in the preferred alternative, a ratio that would remain the same for the life of the plan and provide the greatest planning stability for river users and park managers.*

**Initiatives Related to Culturally Affiliated Indian Tribes.** *In the Draft Environmental Impact Statement for the CRMP, the NPS proposed implementing three initiatives related to culturally affiliated American Indian tribes and enhanced interpretation of the Grand Canyon from a Native American perspective. After receiving public comment on these initiatives and further considering them, the NPS has decided to proceed as follows:*

1. *The NPS proposed offering a new, full-river concession contract, carved out of the current commercial allocation, to be awarded competitively under existing authorities, including, if appropriate, 36 CFR subsection 51.17(b)(2). The new contract would comprise 2,500 user-days (six launches) during the spring and summer. The public did not support this initiative and the NPS has reconsidered the benefits of offering a new*

*concession contract. Instead, in accordance with 36 CRF subsection 51.17(b)(2), the NPS will include in the prospectus for the commercial river-running concession contracts a secondary selection factor calling for the interpretation of the Grand Canyon from the perspective of American Indian tribes that have historical ties to the canyon and are culturally affiliated with it, especially if such interpretation is provided by a member of a culturally affiliated tribe employed by the offerer.*

- 2. The NPS proposed recommending to the Department of the Interior that it support the Hualapai Tribe's efforts to obtain special legislation authorizing a noncompetitive full-river concession contract for the Tribe or a tribally owned enterprise, if the tribe's legislative proposal is consistent with the management objectives of the Lees Ferry and Lower Gorge alternatives selected as the final management plan and the record of decision for this environmental impact statement. The NPS has initiated the requisite discussions with departmental officials concerning the Tribe's efforts. At an appropriate time and in response to a request from Congress, the department will determine its official position with respect to any such legislative proposal.*
- 3. The NPS proposed assisting any federally recognized American Indian tribe that has historical ties to the canyon and is culturally affiliated with it in gaining the expertise and skills necessary to compete for procurement contracts to provide services and logistical support for administrative trips, including research trips. At the request of any tribe meeting those criteria, the NPS will provide such assistance.*

#### KEY CHANGES TO OPERATING REQUIREMENTS

- *Recreational passengers, whether commercial or noncommercial, will be limited to one river trip per year from Lees Ferry to Diamond Creek.*
- *To improve safety, commercial passengers must be accompanied by a NPS-approved guide on all trip-related hikes, including hiking exchanges into and out of the canyon.*
- *Commercial guides will be included in the commercial group size limits.*
- *Visitation at the mouth of Tapeats and Kanab Creeks will be restricted to day-use only.*
- *To protect humpback chub, visitation at the southern half of the Little Colorado River will be restricted seasonally (March 1 to November 30).*

**Noncommercial Permit System.** The noncommercial permit system *is independent of the CRMP alternatives*. The preferred option is a “*hybrid*” weighted lottery. *Each year a lottery would be used to award the following year's noncommercial launches. Chances in the lottery would vary depending on whether or not applicants had been on a Grand Canyon river trip within the past four years.*

#### ENVIRONMENTAL CONSEQUENCES

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The environmental consequences for the alternatives are summarized for natural and cultural resources, visitor experience, socioeconomic resources, park operations, adjacent lands, and *wilderness character*. This summary includes an impact rating, potential for mitigation, and how well the alternative meets the management objectives outlined in this plan.

## LEES FERRY ALTERNATIVES

### Alternative A (Existing Conditions)

- For all **natural resources**, *the range of* impacts would be adverse, localized **to regional**, short- to long-term, seasonal to year-round, and **negligible** to major. Except for air quality, terrestrial wildlife, and **special status** species, current conditions do not meet management objectives for natural resources due to spikes in use, large group sizes, and lack funds for active site management.
- For all **cultural resources**, impacts would be adverse, localized, short- to long-term, seasonal to year-round, and minor to major. Management objectives would not be met due to spikes in visitation, large group sizes, and lack of active site management.
- For **visitor use and experience**, impacts would be adverse, localized to regional, **seasonal to year-round**, short- to long-term, and negligible to major for some users, while impacts for other users would be beneficial, localized to regional, short- to long-term, **seasonal to year-round**, and minor to moderate. Management objectives would be met (with reasonable mitigation) except for reducing impacts from crowding during the summer months.
- For **socioeconomic resources**, impacts would be both direct and indirect and negligible. Management objectives would be met.
- For **park management and operations**, impacts would be adverse, localized and regional, short-term, and negligible, **to** long-term and moderate. Management objectives would not be met due to inadequate fiscal and human resources.
- For **adjacent lands**, impacts would be adverse, localized, seasonal, short-term, and moderate. Management objectives would be met except for the effects **to put-in and takeout locations** from spikes in use and group size.
- *For wilderness character, impacts would be adverse, localized to regional, short-to long-term, seasonal to year round, minor to major effects. Management objectives would not be met, except when implementing minimum requirement protocols.*

### Alternative B

- For all **natural resources**, *the range of* impacts would be adverse, localized **and regional** short- to long-term, seasonal to year round, and negligible to major, **except for air quality where impacts would be negligible and beneficial.** Management objectives would be met or exceeded (with reasonable mitigations) with the elimination of **motors and** spikes in use and reduction in group sizes and trip lengths.
- For all **cultural resources**, impacts would be adverse, localized, long-term, year-round, and negligible to moderate. Management objectives would be met (with reasonable mitigation) with the elimination of spikes in visitation and reduction in group sizes.
- For **visitor use and experience**, impacts would be adverse, localized to regional, **seasonal to year-round**, short- to long-term, negligible to major for some users, while impacts for other users would be beneficial, localized to regional, **seasonal to year-round**, short- to long-term, and moderate to major. Management objectives would be met except that the elimination of motorized use would reduce the diversity of trip types.

- For **socioeconomic resources**, impacts would be adverse, long-term, and moderate for commercial *operators*, and ***adverse, long-term and major for the Bar 10 Ranch***. Adverse, long-term, and minor impacts are projected for Hualapai tribal enterprises, with negligible effects to the regional economy. Management objectives would be met (with reasonable mitigation to commercial operations) except for the Bar 10 Ranch facility.
- For **park management and operations**, impacts would be adverse, localized and regional, short-term and minor, ***to*** long-term and moderate. Management objectives would be met (with reasonable mitigation) through reductions in levels of use.
- For **adjacent lands**, impacts would be beneficial, localized, short- to long-term, year-round, and minor to moderate. Management objectives would be met through elimination of spikes in use and reductions in group size.
- ***For wilderness character, impacts would be beneficial and adverse, localized to regional, short- to long-term, seasonal to year round negligible to moderate effects. Management objectives would be met.***

### **Alternative C**

- For all **natural resources**, ***the range of impacts would be adverse, localized and regional short to long-term, seasonal to year round, and negligible to major, except for air quality where impacts would be negligible and beneficial.*** Management objectives would not be met for soils, vegetation, terrestrial wildlife, aquatic resources, and ***special status*** species. Other natural resource management objectives would be met ***or exceeded*** with reasonable mitigation.
- For all **cultural resources**, impacts would be adverse, localized, long-term, year-round, and moderate to major. Management objectives would not be met due to increases in use, especially during off-season months. Management objectives would be met (with reasonable mitigation) regarding preserving traditional access for American Indians.
- For **visitor use and experience**, impacts would be adverse, localized to regional, short- to long-term, ***seasonal to year-round***, and negligible to major for some users, while impacts for other users would be beneficial, localized to regional, ***seasonal to year-round***, short- to long-term, and minor to moderate. Management objectives would be met (with reasonable mitigation) except that the elimination of motorized use would reduce the diversity of trip types.
- For **socioeconomic resources**, impacts would be beneficial, long-term, and major for commercial *operators*; adverse, long-term, and major for Bar 10 Ranch; and negligible for Hualapai tribal enterprises and the regional economy. Management objectives would be met, ***with the exception of impacts to the Bar 10 Ranch facility.***
- For **park management and operations**, impacts would be adverse, localized and regional, short-term and major, ***to*** long-term and moderate. Management objectives would be met (with reasonable mitigation) through reductions in group size and spreading use throughout the year.
- For **adjacent lands**, impacts ***would be adverse negligible to minor and beneficial minor to moderate, localized, year-round, and short to long term.*** Management objectives evaluations would be ***met***.

- *For wilderness character, impacts would be beneficial and adverse, localized to regional, short- to long-term, seasonal to year round negligible to moderate effects. Management objectives would be met.*

#### Alternative D

- For all **natural resources**, *the range of* impacts would be *adverse, localized and regional short to long-term, seasonal to year round, and negligible to major, except for air quality where impacts would be negligible and beneficial.* Management objectives would be met *(with reasonable mitigations) with the elimination of spikes in use and reduction in group sizes and trip lengths.*
- For all **cultural resources**, impacts *would be adverse, localized, long-term, year-round, and moderate to major. Management objectives would not be met due to increases in use, especially during off-season months. Management objectives would be met (with reasonable mitigation) regarding preserving traditional access for American Indians.*
- For **visitor use and experience**, impacts would be adverse, localized to regional, *seasonal to year-round*, short- to long-term, and negligible to major for some users, while impacts for other users would be beneficial, localized to regional, *seasonal to year-round*, short- to long-term, and minor to major. Management objectives would be met (with reasonable mitigations) except for the elimination of Whitmore helicopter exchange opportunities, which would reduce the diversity of trip types.
- For **socioeconomic resources**, impacts would be beneficial, long-term, and major for commercial *operators*; adverse, long-term, and major for Bar 10 Ranch; adverse, long-term, and minor for Hualapai tribal enterprises; and negligible for the regional economy. Except for impacts to the Bar 10 Ranch operation, management objectives would be met.
- For **park management and operations**, impacts would be adverse, localized and regional, short-term *moderate* to long-term minor. Management objectives would be met.
- For **adjacent lands**, impacts would be adverse *negligible to* minor to beneficial *minor to* moderate, *short- to* long-term, *and* localized. Management objectives would be *met*.
- *For wilderness character, impacts would be beneficial and adverse, localized to regional, short- to long-term, seasonal to year round negligible to moderate effects. Management objectives would be met, but to a lesser degree due to limited nonmotorized periods.*

#### Alternative E

- For all **natural resources**, *the range of* impacts would be *adverse, localized to regional, short to long-term, seasonal to year-round, and negligible to major. Management objectives would be met (with reasonable mitigations) with the elimination of spikes in use and reduction in group sizes and trip lengths.*
- For all **cultural resources**, impacts would be adverse, localized, long-term, year-round, and minor to moderate. Management objectives would be met *(with reasonable mitigation) with the elimination of spikes in visitation and reduction in group sizes.*

- For **visitor use and experience**, impacts would be *adverse, localized to regional, seasonal to year round short to long-term, and negligible to major for some users, while impacts for other users would be beneficial, localized to regional, short to long-term, seasonal to year-round and minor to moderate. Management objectives would be met (with reasonable mitigation) except for reducing impacts from crowding during the summer months.*
- For **socioeconomic resources**, impacts would be beneficial, long-term, and minor for commercial *operators*; adverse, long-term, and major for Bar 10 ranch; and negligible for Hualapai tribal enterprises and the regional economy. *Except for impacts to the Bar 10 Ranch operation, management objectives would be met.*
- For **park management and operations**, impacts *be adverse, localized and regional, short-term moderate to long-term minor. Management objectives would be met (with reasonable mitigations).*
- For **adjacent lands**, impacts would be localized, short- to long-term, year-round, and minor adverse to minor beneficial. Management objectives would be met *through elimination of spikes in use and reductions in group size.*
- *For wilderness character, impacts would be beneficial and adverse, localized to regional, short- to long-term, seasonal to year round negligible to moderate effects. Management objectives would be met, but to a lesser degree due to limited nonmotorized periods.*

#### **Alternative F**

- For all **natural resources**, *the range of* impacts would be *adverse, localized to regional, short to long-term, seasonal to year-round, and negligible to major.* Management objectives would not be met for soils, natural soundscape, vegetation, terrestrial wildlife, aquatic resources, or special status species. Management objectives for other natural resources would be met (with reasonable mitigation).
- For all **cultural resources**, impacts would be adverse, localized, long-term, year-round, and minor to major. Management objectives would be met *(with reasonable mitigation).*
- For **visitor use and experience**, impacts would be adverse, localized to regional, short- to long-term, *seasonal to year-round*, and negligible to major for some users, while impacts for other users would be beneficial, localized to regional, short- to long-term, *seasonal to year-round*, and minor. Management objectives would be met (with reasonable mitigation), *except for reducing impacts from crowding during May and June.*
- For **socioeconomic resources**, impacts would be direct, beneficial, long-term, and moderate for commercial *operators*; impacts would be *adverse, long-term, and minor* for Bar 10 Ranch; *long-term and negligible* for Hualapai tribal enterprises, and the regional economy. Management objects would be *exceeded.*
- For **park management and operations**, impacts would be adverse, localized and regional, and short-term major to long-term moderate. Management objectives would not be met due to the substantial shift in use patterns and increased use in the spring months.



- For **adjacent lands**, impacts would be adverse, localized, short-term, seasonal, and minor to moderate. Management objectives would be met by eliminating spikes in use and reducing group size.
- *For wilderness character, impacts would be beneficial and adverse, localized to regional, short- to long-term, seasonal to year round minor to major effects. Management objectives are met, but only for a portion of the year due to limited nonmotorized opportunities.*

### Alternative G

- For all **natural resources**, *the range of* impacts would be *adverse, localized to regional, short to long-term, seasonal to year-round, and negligible to major*. Management objectives would not be met *for soils, natural soundscape, vegetation, terrestrial wildlife, aquatic resources, or special status species. Management objectives for other natural resources would be met (with reasonable mitigations).*
- For all **cultural resources**, impacts *adverse, localized, long-term, year-round, and minor to major. Management objectives would be met (with reasonable mitigation).*
- For **visitor use and experience**, impacts would be *adverse, localized to regional, short to long-term, seasonal to year-round, and negligible to major for some users, while impacts for other users would be beneficial, localized to regional, short to long-term, seasonal to year-round, and minor*. Management objectives would be met (with reasonable mitigation), *except for reducing impacts from crowding during the non-summer months.*
- For **socioeconomic resources**, impacts would be beneficial, long-term, and minor for commercial *operators*, Bar 10 Ranch, and Hualapai tribal enterprises *impacts would be negligible for the regional economy*. Management objectives would be met.
- For **park management and operations**, impacts would be adverse, localized and regional, and short-term major, *to* long-term major. Management objectives would not be met due to large group sizes and increased year-round use.
- For **adjacent lands**, impacts and management objectives evaluations would be the same as described for Alternative F.
- *For wilderness character, impacts would be adverse, localized to regional, short- to long-term, seasonal to year round minor to major effects. Management objectives would not be met for most of the year, except for implementing the minimum requirement protocols.*

### Modified Alternative H (NPS Preferred)

- For all **natural resources**, *the range of* impacts would be *adverse, localized to regional, short to long-term, seasonal to year-round, and negligible to major*. Management objectives would be met.
- For all **cultural resources**, impacts would be *adverse, localized, long-term, year-round, and minor to moderate. Management objectives would be met (with reasonable mitigation) with the elimination of spikes in visitation and reduction in group sizes.*

- For **visitor use and experience**, impacts would be adverse, localized to regional, short- to long-term, *seasonal to year-round*, and negligible to moderate for some users, while impacts for other users would be beneficial, localized to regional, short- to long-term, *seasonal to year-round*, and minor to moderate. Management objectives would be met (with reasonable mitigation).
- For **socioeconomic resources**, impacts would be beneficial, long-term, and minor for commercial *operators*; *adverse*, long-term, and *minor* for Bar 10 Ranch; negligible for Hualapai tribal enterprises and the regional economy. Management objectives would be met.
- For **park management and operations**, impacts would be adverse, localized and regional, short- to long-term, and moderate. Management objectives would be met (with reasonable mitigation).
- For **adjacent lands**, impacts would be adverse, localized, long-term, year-round, and minor to moderate. Management objectives would be met.
- *For wilderness character, impacts would be, beneficial and adverse, localized to regional, short- to long-term, seasonal to year round negligible to moderate effects. Management objectives would be met, especially during non-peak, nonmotorized periods.*

## LOWER GORGE ALTERNATIVES

### Alternative 1

- For all **natural resources**, *the range of* impacts would be adverse, localized to regional, short- to long-term, *seasonal to* year-round, and negligible to major. Except for air quality, management objectives would not be met due to unregulated use, unlimited trip lengths, and large group sizes.
- For **cultural resources**, impacts would be adverse, localized, long-term, year-round, and minor to major. Management objectives would not be met due to unregulated use and unlimited trip lengths.
- For **visitor use and experience**, impacts would be adverse, localized to regional, short- to long-term, and negligible to major for some users, while impacts for other users would be beneficial, localized to regional, short- to long-term, and negligible to moderate. Management objectives would not be met except in providing a diverse range of opportunities.
- For **socioeconomic resources**, impacts would be negligible, localized, and long-term. Management objectives would be met.
- For **park management and operations**, impacts would be adverse, localized and regional, and short-term negligible *to* long-term major. Management objectives would not be met due to inadequate fiscal and human resources.
- For **adjacent lands**, impacts would be negligible. Management objectives would be met.

- *For wilderness character, impacts would be, adverse, localized to regional, short- to long-term, seasonal to year round, minor to major effects. Management objectives are not being met.*

## Alternative 2

- For all **natural resources**, *the range of* impacts would be adverse, localized to regional, short- to long-term, *seasonal to year-round*, and *negligible* to major. Except for natural soundscape in the Quartermaster area, management objectives would be met.
- For **cultural resources**, impacts would be adverse, localized, long-term, year-round, and negligible to moderate. Management objectives would be met (with reasonable mitigation) due to implementation of regulated use and reduction in trip length.
- For **visitor use and experience**, impacts would be adverse, localized to regional, short- to long-term, and negligible to moderate for some users, while impacts for other users would be beneficial, localized to regional, short- to long-term, and negligible to major. Management objectives would be met.
- For **socioeconomic resources**, impacts would be beneficial, localized, long-term, and major on Hualapai tribal enterprises; *negligible on the regional economy*. Management objectives would be met despite the elimination of pontoon boat use.
- For **park management and operations**, impacts would be adverse, regional, short-term, and major on park *patrols*; beneficial, localized and regional, long-term, and moderate relative to visitor safety and resource management. Management objectives would be met (with reasonable mitigation) by reducing use levels and eliminating pontoon boat use.
- For **adjacent lands**, impacts *would be negligible. Management objectives would be met.*
- *For wilderness character, impacts would be adverse, localized to regional, short- to long-term, seasonal to year round, minor to major effects in Zone 2 and in Zone 3. Management objectives would be met, but to a lesser degree in Zone 2, but would not be met in Zone 3.*

## Alternative 3

- For all **natural resources**, *the range of* impacts would be adverse, localized to regional, short- to long-term, *seasonal to year-round*, and *negligible* to major. Management objectives would be met (with reasonable mitigation) except for terrestrial wildlife, special status species, and natural soundscapes due to increased overnight and pontoon boat use.
- For **cultural resources**, impacts *would be adverse, localized, long-term, year-round, and negligible to moderate. Management objectives would be met (with reasonable mitigation) due to implementation of regulated use and reduction in trip length.*
- For **visitor use and experience**, impacts would be adverse, localized to regional, short- to long-term, *seasonal to year-round*, and negligible to major for some users, while impacts for other users would be beneficial, localized to regional, short- to long-term, *seasonal to year-round*, and minor to moderate. Management objectives would be met

except for wilderness river objectives because of helicopter tours associated with pontoon boat use.

- For **socioeconomic resources**, impacts would be *beneficial, localized, long-term, and major on Hualapai tribal enterprises; negligible on the regional economy*. Management objectives would be met.
- For **park management and operations**, impacts would be adverse, localized and regional, short- to long-term, and major. Management objectives would not be met due to the pontoon boat use and increased daily launches.
- For **adjacent lands**, impacts *would be negligible. Management objectives would be met*.
- *For wilderness character, impacts would be, adverse, localized to regional, short- to long-term, seasonal to year round, minor to major effects in Zone 2 and moderate to major effects in Zone 3. Management objectives would not be met, although implementation of minimum requirement protocols would help meet one objective.*

#### **Modified Alternative 4 (NPS Preferred Alternative)**

- For all **natural resources**, *the range of* impacts would be *adverse, localized to regional, short to long term, seasonal to year-round, and negligible to major*. Management objectives would be met (with reasonable mitigation) except for terrestrial wildlife, and *special status* species, and natural soundscapes due to increased overnight and pontoon boat use.
- For **cultural resources**, impacts *would be adverse, localized, long-term, year-round, and negligible to moderate. Management objectives would be met (with reasonable mitigation) due to implementation of regulated use and reduction in trip length*.
- For **visitor use and experience**, impacts would be adverse, localized to regional, short- to long-term, *seasonal to year-round*, and minor to major for some users, while impacts for other users would be beneficial, localized to regional, short- to long-term, *seasonal to year-round*, and minor to major. Management objectives would be met except for wilderness river objectives because of helicopter tours *associated with* pontoon boat use.
- For **socioeconomic resources**, impacts would be *beneficial, localized, long-term, and major on Hualapai tribal enterprises; negligible on the regional economy*. Management objectives would be *met*.
- For **park management and operations**, impacts would be adverse, localized and regional, short- *to long-term* and *moderate to major*. Impacts would be beneficial, localized, long-term, and moderate relative to visitor safety and resource management. Management objectives would be met *only for one objective (in Zone 2)*.
- For **adjacent lands**, impacts *would be negligible. Management objectives would be met*.
- *For wilderness character, impacts would be, adverse, localized to regional, short- to long-term, seasonal to year round, minor to major impacts on wilderness character in Zone 2 and moderate to major in Zone 3. Management objectives would not be met, although implementation of minimum requirement protocols would help meet one objective in Zone 2.*

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**Alternative 5 (Hualapai Proposed Action)**

- For all **natural resources**, *the range of* impacts would be **adverse, localized to regional, short to long term, seasonal to year-round, and negligible to major**. Management objectives would not be met except for water and air quality, and caves and paleontological resources (with reasonable mitigations).
- For **cultural resources**, impacts *would be* **adverse, localized, long-term, year-round, and negligible to moderate**. *Management objectives would be met (with reasonable mitigation) due to implementation of regulated use and reduction in trip length*.
- For **visitor use and experience**, impacts would be adverse, localized to regional, short- to long-term, **seasonal to year-round**, and minor to major for some users, while impacts for other users would be beneficial, localized to regional, short- to long-term, **seasonal to year-round**, and minor to major. Management objectives would not be met except in providing a diverse range of opportunities.
- For **socioeconomic resources**, impacts would be **beneficial, localized, long-term, and major on Hualapai tribal enterprises; negligible on the regional economy**. Management objectives would be met.
- For **park management and operations**, impacts would be **adverse, localized and regional, short- to long-term and moderate to major**. Management objectives would be met *only for one objective (in Zone 2)*.
- For **adjacent lands**, impacts *would be negligible*. *Management objectives would be met*.
- *For wilderness character, impacts would be adverse, localized to regional, short- to long-term, seasonal to year round, minor to major impacts on wilderness character in Zone 2 and moderate to major in Zone 3. Management objectives would not be met, although implementation of minimum requirement protocols would help meet one objective in Zone 2.*

